PORTFOLIO 1 - STUDENT SUBMISSION

Student Name: Add your name here Student ID: Add number here

Stream: Add Year and Stream

Submit this document by the due date to Moodle when you have completed it.

WATER SUPPLY

Learning Outcomes:

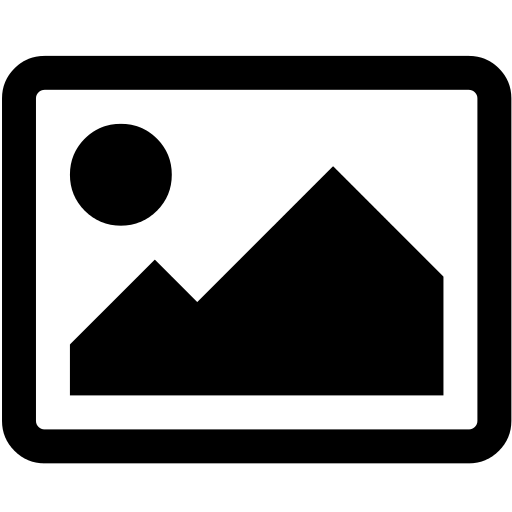
1. Investigate how water is supplied and treated
2. Investigate related legislative requirements
3. Recognise and name the components and fixtures related to a reticulation system
4. Produce an accurate installation diagram from a floor plan
5. Create an instructional job card
6. Prepare pipework for installation
7. Install under supervision a water reticulation system for hot and cold water
8. Install under supervision a low-pressure hot water system

**Learning Outcome 1:**

Investigate how water is supplied and treated

Add a diagram that you have created and labelled using key words that shows clearly the process of how water is supplied to a home, as clean potable water, then treated and recycled. This can not be something that you have copied off the internet of the Moodle page or out of a book it must be your own work.

**Add diagram here**



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**REPLACE THIS IMAGE**

In no more than two paragraphs describe your diagram using key words from the glossary.

**Add Description of the Water Supply and Treatment Process here.**

**REPLACE THIS IMAGE**



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**Learning Outcome 2:**

Investigate related legislative requirements

G12: Requires the safe supply, storage, reticulation and delivery of hot and cold water.

In the table below provide a reference from the G12 document that relates to the following situations. Explain why this is important.

|  |  |  |
| --- | --- | --- |
| Situation | Building Code Reference | Why is this important? |
| Installing a sanitary hand basin |  |  |
| Storing potable water for home use |  |  |
| Supplying hot water to a tap |  |  |
| Another example |  |  |

**Learning Outcome 3:**

Recognise and name the components and fixtures related to a reticulation system

|  |  |  |
| --- | --- | --- |
| Image | Name of fixture | Purpose |
|  |  |  |
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**Learning Outcome 4:**

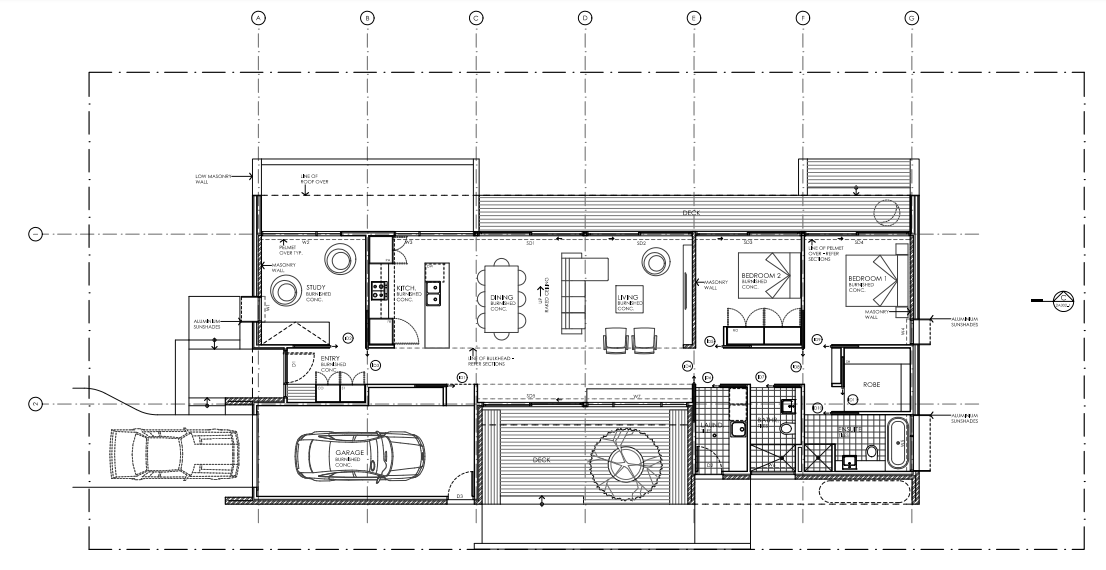
Produce an accurate installation diagram from a floor plan

When installing pipework in a home it is useful to know where the pipes need to go. Referring to architectural plans and / or drawing a plan can help you think of issues ahead of time and plan your job more effectively.

On the following page add a picture of your completed floor plan for hot water and cold-water supply to the bathroom, toilet and kitchen.

Include:

1. Blue lines for cold
2. Red lines for hot water
3. Label where fixtures will be located
4. Label Mains water lines from council access



|  |  |
| --- | --- |
| INSTALL A WATER TANK AND PIPE WORK | |
| Tools Required:   * Add to this list | Fittings and Fixtures Required:   * Add to this list |
| PROCEDURE | |
| Step:   1. What needs to be prepared for this job 2. Add to your procedural list here | |
| LEGISLATION | |
| 1. Reference any legislation that relates to this job or the environment the appliance / fitting is located in. 2. Add to list here 3. Add to list here | |
|  | |
|  | |
|  | |
| CALCULATIONS | |
| Add an image of any calculations you did here | |

**HEALTH AND SAFETY RISK ASSESSMENT**

Complete the following form for this job as a hard copy and get your Tutor to sign it. Add a quality photo or photocopy of your completed form in the space below.

HEALTH AND SAFETY RISK ASSESSMENT FORM

**ACTIVITY: Water Tank**

|  |  |  |  |
| --- | --- | --- | --- |
| **IDENTIFY RISKS: Highlight / tick those that apply** | | | |
| Tick the potential risks(s) for this activity: | | | |
| * Slips, trips and falls | * Heavy items that could fall | * Sharp objects or tools | * Electrical equipment (incl. power tools) |
| * Gas equipment | * Machinery (moving parts) | * Machinery (sparks) | * Hand tools |
| * Toxic fumes and dust | * Poisonous chemicals | * Flammable substances | * Excessive noise |
| * Ladders (heights) | * Temperature | * Fatigue | * Flames |
| List any other risks:  Add text here | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **RISK CONTROL METHOD:** | | | |
| Write what you will do to eliminate or minimise each risk: | | | |
| **RISK:** | **WHAT MIGHT HAPPEN:** | **HOW YOU WILL ELIMINATE:** | **HOW YOU WILL MINIMISE:** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **PERSONAL PROTECTIVE EQUIPMENT (PPE):** | | | |
| Tick the personal protective equipment (PPE) needed to complete this activity: | | | |
| * Footwear | * Overalls | * Safety glasses | * Safety gloves |
| * Welding mask | * Earmuffs / earplugs | * Hard hat | * Hi-vis vest |
| List any other personal protective equipment (PPE) required:  Add text here | | | |

Add text here

Write or draw about what you plan to do to complete this activity.

**PLANNING:**

|  |  |  |  |
| --- | --- | --- | --- |
| **TUTOR SIGNATURE:** |  | **DATE:** |  |

Photographic Evidence of Water Tank installation and pipe work

|  |  |
| --- | --- |
| Step 1 | Step 2 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |
| Step 3 | Step 4 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |
| Step 5 | Step 6 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |

|  |  |
| --- | --- |
| INSTALL A LOW-PRESSURE HOT WATER CYLINDER AND PIPE WORK | |
| Tools Required:   * Add to this list | Fittings and Fixtures Required:   * Add to this list |
| PROCEDURE | |
| Step:   1. What needs to be prepared for this job 2. Add to your procedural list here | |
| LEGISLATION | |
| 1. Reference any legislation that relates to this job or the environment the appliance / fitting is located in. 2. Add to list here 3. Add to list here | |
|  | |
|  | |
|  | |
| CALCULATIONS | |
| Add an image of any calculations you did here | |

**HEALTH AND SAFETY RISK ASSESSMENT**

Complete the following form for this job as a hard copy and get your Tutor to sign it. Add a quality photo or photocopy of your completed form in the space below.

HEALTH AND SAFETY RISK ASSESSMENT FORM

**ACTIVITY: Hot Water Cylinder**

|  |  |  |  |
| --- | --- | --- | --- |
| **IDENTIFY RISKS: Highlight / tick those that apply** | | | |
| Tick the potential risks(s) for this activity: | | | |
| * Slips, trips and falls | * Heavy items that could fall | * Sharp objects or tools | * Electrical equipment (incl. power tools) |
| * Gas equipment | * Machinery (moving parts) | * Machinery (sparks) | * Hand tools |
| * Toxic fumes and dust | * Poisonous chemicals | * Flammable substances | * Excessive noise |
| * Ladders (heights) | * Temperature | * Fatigue | * Flames |
| List any other risks:  Add text here | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **RISK CONTROL METHOD:** | | | |
| Write what you will do to eliminate or minimise each risk: | | | |
| **RISK:** | **WHAT MIGHT HAPPEN:** | **HOW YOU WILL ELIMINATE:** | **HOW YOU WILL MINIMISE:** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **PERSONAL PROTECTIVE EQUIPMENT (PPE):** | | | |
| Tick the personal protective equipment (PPE) needed to complete this activity: | | | |
| * Footwear | * Overalls | * Safety glasses | * Safety gloves |
| * Welding mask | * Earmuffs / earplugs | * Hard hat | * Hi-vis vest |
| List any other personal protective equipment (PPE) required:  Add text here | | | |

Add text here

Write or draw about what you plan to do to complete this activity.

**PLANNING:**

|  |  |  |  |
| --- | --- | --- | --- |
| **TUTOR SIGNATURE:** |  | **DATE:** |  |

Photographic Evidence of Low-Pressure Hot Water Cylinder Installation and pipe work

|  |  |
| --- | --- |
| Step 1 | Step 2 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |
| Step 3 | Step 4 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |
| Step 5 | Step 6 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |